



CINT2000 Result

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Unisys Corporation
ES7000 ORION 540 (3.0GHz Xeon MP)

SPECint_rate2000 = 331
SPECint_rate_base2000 = 317

SPEC license #: 15 Tested by: Unisys Corporation Test date: Jul-2004 Hardware Avail: Apr-2004 Software Avail: Aug-2004

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	32	200	259	32	200	259
175.vpr	32	244	213	32	217	240
176.gcc	32	89.8	455	32	89.8	455
181.mcf	32	365	183	32	365	183
186.crafty	32	99.5	373	32	89.8	413
197.parser	32	182	368	32	175	383
252.eon	32	92.2	523	32	92.2	523
253.perlbnk	32	152	439	32	143	468
254.gap	32	357	114	32	353	116
255.vortex	32	193	365	32	169	418
256.bzip2	32	167	334	32	167	334
300.twolf	32	214	520	32	208	536

Hardware

CPU: Intel Xeon MP(400MHz system bus)
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 32 cores, 32 chips, 1 core/chip (HT Technology disabled)
 CPU(s) orderable: 16,20,24,28,32
 Parallel: No
 Primary Cache: 12K(I) micro-ops + 8KB(D) on chip
 Secondary Cache: 512KB (I+D) on chip
 L3 Cache: 4096KB (I+D) on chip
 Other Cache: 32MB L4 Cache off chip per 4 CPUs
 Memory: 8 GB
 Disk Subsystem: 1X36GB SCSI DISK (15K rpm)
 Other Hardware:

Software

Operating System: Suse Linux Enterprise Server release 9.0 RC 5, 2.6.5-7.97-bigsm
 Compiler: Intel(R) C++ Compiler for Linux 7.1 (Build 20040309Z)
 Intel(R) C++ Compiler for Linux 8.0 (Build 20040412Z)
 File System: ext2
 System State: Multi-user (init 3)

Notes/Tuning Information

Portability Flags:

```
176.gcc: -Dalloca=_alloca -DUSG
186.crafty: -DLINUX_i386
252.eon: -DHAS_ERRLIST
252.eon: srcalt=fmax_errno
253.perlbnk: -DSPEC_CPU2000_LINUX_I386 -DSPEC_CPU2000_NEED_BOOL
           -DSPEC_CPU2000_GLIBC22
254.gap: -DSYS_IS_USG -DSYS_HAS_IOCTL_PROTO -DSYS_HAS_TIME_PROTO
         -DSYS_HAS_SIGNAL_PROTO -DSYS_HAS_ANSI -DSYS_HAS_CALLOC_PROTO
255.vortex: srcalt=closed_files
```

Baseline tuning flags:

```
C programs : -xi -ipo -fp_port
CXX programs: -xW -O3 -ipo +FDO
```

Peak tuning flags:

```
164.gzip: basepeak=yes
175.vpr: PASS1= -xW -prof_gen PASS2= -xW -O3 -ipo -prof_use
176.gcc: basepeak=yes
```



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Notes/Tuning Information (Continued)

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181.mcf: basepeak=yes
186.crafty: PASS1= -xW          -prof_gen PASS2= -xW -O3 -ipo          -prof_use
197.parser: PASS1= -xW          -prof_gen PASS2= -xW -O3 -ipo          -prof_use
252.eon: basepeak=yes
253.perlbnk: PASS1= -xW          -prof_gen PASS2= -xW -O3 -ipo          -prof_use
254.gap: PASS1= -xi            -prof_gen PASS2= -xi      -ipo -fp_port -prof_use
255.vortex: PASS1= -xi            -prof_gen PASS2= -xi      -ipo -fp_port -prof_use
256.bzip2: basepeak=yes
300.twolf: PASS1= -xW          -prof_gen PASS2= -xW -ipo -Oa -O3          -prof_use

```

HyperThreading disabled in BIOS

Enabled two user settings in the BIOS:

1. "Adjacent Sector Prefetch"
2. "Prefetch Queue"

The Intel 8.0 and 7.1 compilers were invoked using their fully qualified paths; the environment setting scripts were not used during compilation or runtime.